UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4
Atlanta, Georgia

Preliminary Determination & Statement of Basis

Clean Air Act Permit to Construct DPA-EPA-R4001
for

Port Dolphin Energy LLC

October 13, 2011

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Acronyms and Abbreviations

° C	degrees Celsius
° F	degrees Fahrenheit
µg	microgram(s)
Applicant	Port Dolphin LNG LLC, the Applicant for the deepwater port license
AQRV	Air Quality Related Value
BACT	Best Available Control Technology
bscf/d	billion standard cubic feet per day
Btu	British thermal unit
CAA	Clean Air Act
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	carbon monoxide
EPA	United States Environmental Protection Agency
FAC	Florida Administrative Code
FEIS	Final Environmental Impact Statement (issued pursuant to the National Environmental Policy Act)
g	gram(s)
HAP	hazardous air pollutant
hr	hour(s)
km	kilometer(s)
kW	kilowatt(s)
kWh	kilowatt-hour
lb	pound(s)
LNG	liquefied natural gas
m^3	cubic meter(s)
MARAD	U.S. Maritime Administration
mg	milligram(s)
MMBtu	million British thermal units
N_2	nitrogen
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NH_3	ammonia
NOAA	National Oceanic and Atmospheric Administration
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NSPS	New Source Performance Standards
NSR	New Source Review
O_2	oxygen
O_3	ozone
Pb	lead
ppb	parts per billion
PLEM	pipeline end manifold
PM	particulate matter

PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
ppm	parts per million
ppmw	parts per million, by weight
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RBLC	RACT/BACT/LAER Clearinghouse
scf	standard cubic feet
SCR	Selective Catalytic Reduction
SIL	Significant Impact Level
SO_2	sulfur dioxide
SRV	shuttle and regasification vessel
tpy	tons per year
U.S.C	United States Code
USCG	United States Coast Guard
VOC	volatile organic compounds
yr	year

I. INTRODUCTION

On August 27, 2010, Port Dolphin Energy LLC (of Port Dolphin), a Delaware limited liability company, submitted an application to the EPA Region 4 for an air permit to construct and operate a liquefied natural gas (LNG) deepwater port off the coast of Florida. This application supersedes an application submitted in June 2007. After reviewing the application and additional information submitted by the applicant, the EPA Region 4 has prepared the following Preliminary Determination and draft air permit to approve construction and operation of air emission sources at Port Dolphin's proposed deepwater port project.

The Preliminary Determination documents the information and analysis the EPA used to support the decisions the EPA made in drafting the air permit. It includes a description of the proposed facility, the applicable air permit requirements, and an analysis showing how the applicant has met the requirements. Additionally, more detailed information can be found in the draft permit accompanying this document, as well as in the application and the administrative record for this project.

The EPA Region 4 concludes that Port Dolphin's application is complete and provides the necessary information to demonstrate that the proposed project meets the applicable air permit regulations. The EPA's conclusions rely upon information provided in the permit application, supplemental information provided by the applicant, permits from similar deepwater ports in Region 1, (Northeast Gateway Energy Bridge and Neptune), and the EPA's own technical expertise. The EPA is making this information available as part of the public record.[1]

II. PROJECT OVERVIEW

II.A. Applicant

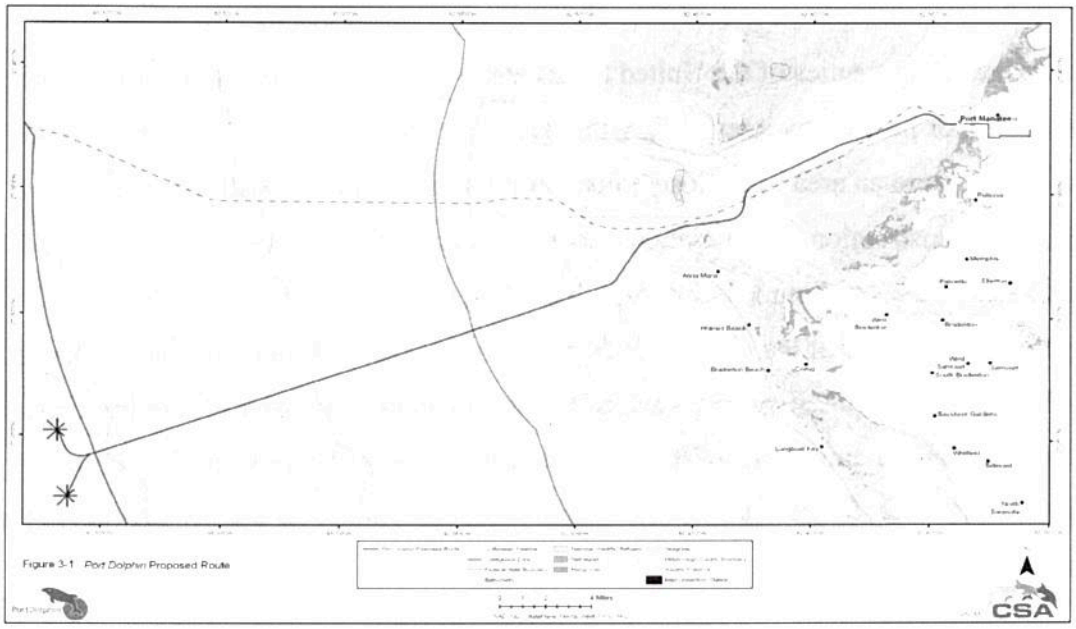
Port Dolphin Energy LLC
400 North Tampa Street, Suite 1015
Tampa, FL 33602

[1] The procedures governing the federal issuance of PSD permits are set forth at 40 CFR part 124, subparts A and C. *See* 40 CFR §§ 124.1. Accordingly, EPA has followed the procedures of 40 CFR part 124 in issuing this draft permit. This Preliminary Determination describes the derivation of the permit conditions and the reasons for them as provided in 40 CFR § 124.7, and also serves as a Fact Sheet and Statement of Basis as provided in 40 CFR § 124.7 and 124.8

II.B. Project Location

The proposed port named *Port Dolphin* will be located in federal waters in blocks PB-545, PB-546, PB-589 and PB-590, approximately 28 miles off the Florida coast and 42 miles southwest of the pipeline landing at Port Manatee, Florida, in a water depth of 100 ft. This area lies within the St. Petersburg block of the Outer Continental Shelf. The location is shown in Figure 1.

Figure 1: Location of Port Dolphin Deepwater Port



Source: Port Dolphin August, 2010 Application

II.C. Permitting Authority

In 2007, Port Dolphin filed an application with the United States Coast Guard (USCG) for a license pursuant to the Deepwater Port Act of 1974, as amended, and the USCG's Temporary Interim Rules to construct, own, and operate a deepwater port. The Deepwater Port Act was enacted in 1975 (P.L. 93-627, §§ 3, 88 Stat. 2127). In 2002, it was amended by the Marine Transportation Security Act to apply to natural gas ports or terminals and is now codified at 33 U.S.C. §§ 1501-1524. The Deepwater Port Act defines a "deepwater port" as "any fixed or floating manmade structure other than a vessel, or any group of such structures, that are located beyond State seaward boundaries and that are used or intended for

use as a port or terminal for the transportation to any State…" A deepwater port includes all components and equipment, including pipelines, pumping or compressor stations, service platforms, buoys, mooring lines, and similar facilities that are proposed or approved for construction and operation as part of a deepwater port, to the extent that they are located seaward of the high water mark and do not include interconnecting facilities. Port Dolphin's proposed LNG vessels are considered to be manmade floating structures, while moored beyond State seaward boundaries. The Port's intended use will be to receive, store, and process LNG for the transportation of natural gas onshore through a pipeline. Consequently, Port Dolphin is considered a deepwater port for the purposes of the Deepwater Port Act. See 33 U.S.C. § 1502(9).

The Constitution, laws, and treaties of the United States apply to deepwater ports, and to activities connected, associated, or potentially interfering with the use or operation of any such port, in the same manner as if such port were an area of exclusive Federal jurisdiction located within a State. See 33 U.S.C. § 1518(a)(1). Construction and operation of a deepwater port requires compliance with all applicable Federal and State environmental statues, including the Clean Air Act (CAA). See 33 CFR §148.737. Important provisions of the CAA include regulation of criteria pollutants and Hazardous Air Pollutants (HAPs), and the requirement that each state have a federally approved State Implementation Plan for the attainment and maintenance of the national primary and secondary ambient air quality standards. The CAA also requires that new sources apply for, and obtain, air quality permits before starting construction.

In addition to the CAA requirements cited above, the Deepwater Port Act states that the applicable state laws of the nearest adjacent coastal state are to be administered and enforced by appropriate federal officials. Therefore, as Florida is the nearest coastal state, the applicable laws of the state of Florida apply to Port Dolphin to the extent such laws are not inconsistent with any provision or regulation under the Deepwater Port Act or other Federal laws and regulations. See 33 U.S.C. § 1518(b). The state of Florida establishes and enforces air pollution regulations in order to attain and maintain all state and federal ambient air quality standards. These regulations, which are included in the EPA approved State Implementation Plan, include requirements for preconstruction air permits and other emission control strategies for the control of stationary source air pollution.

This permitting action addresses only the "preconstruction" permitting requirements required by the CAA, including, the Prevention of Significant Deterioration (PSD) Program requirements, set forth in

title I of the CAA, and implemented through regulations adopted by the state of Florida. Port Dolphin is also subject to other state and federal air pollution requirements for the control of stationary source air pollution, such as New Source Performance Standards, and National Emission Standards for Hazardous Air Pollutants. These requirements are addressed in this Preliminary Determination and the draft permit to the extent that they affect the emissions limits that are established in the preconstruction permit, such as the requirement for Best Available Control Technology. Other applicable CAA requirements, any associated monitoring and recordkeeping requirements, as well as the preconstruction requirements established in this permit, will be included in the title V operating permit for Port Dolphin, which is a separate and subsequent permitting action. For the purpose of this permitting action, the EPA is using the federal administrative procedures, as set forth in 40 CFR 124, for the issuance of PSD permits by the EPA.

II.D. Project Description

Port Dolphin is proposing to construct, own, and operate the deepwater port to import LNG into Manatee County, Florida, using the Gulfstream Natural Gas System, LLC, and Tampa Electric Company Bayside pipeline. This project will result in the construction of facilities capable of receiving and vaporizing liquefied natural gas (LNG) and the construction of transmission pipelines to facilitate delivery within the state of Florida. The construction of the transmission pipelines and the onshore Manatee Valve Station and Interconnection Station are subject to separate permitting actions by the Federal Energy Regulatory Commission and the Florida Department of Environmental Protection.

As described in the application, Port Dolphin will consist of one unloading system comprised of two unloading buoys located approximately 3 miles apart. Each buoy will be capable of mooring one LNG shuttle and regasification vessel (SRV) with a storage capacity of approximately 7.13×10^7 gallons (217,000 cubic meters) of liquefied natural gas cooled at -261° F. The deepwater port will have an average throughput capacity of approximately 1.2 billion standard cubic feet per day (bscf/d) and a peak delivery capacity of approximately 1.9 bscf/d.

During operation, Port Dolphin will pump LNG from the cargo tanks to a common suction drum/re-condenser tank on deck. Marine boilers will supply heat required for LNG vaporization by utilizing a closed-loop system to produce steam. This steam in turn will heat a fluid medium, a water/glycol

mixture, that will circulate through heat exchangers at approximately 90 degrees Celsius (°C), and will leave at approximately 20 °C after LNG vaporization. After heating the LNG, the now cooled fluid will return to the boilers for reheating.

An SRV will moor at the deepwater port between four and eight days. Two separate buoys will allow for continuous delivery of natural gas by scheduling an overlap between arriving and departing SRVs. Port Dolphin intends to have one fully loaded SRV waiting (hoteling) in the arrival zone, or transiting the arrival zone, while two SRVs will operate, one at each buoy. In addition to storing and vaporizing LNG, each SRV will odorize, meter, and deliver natural gas into the pipeline. The SRVs will be supported by one crew boat that will operate for approximately 1 hr/day, and one supply boat that will operate approximately 2 hours/week.

When not connected to an SRV the unloading buoy will submerge 60-70 feet below the sea surface. A winch and a recovery line will retrieve the submerged unloading buoy. The gas will be unloaded through a 16-inch flexible riser into the pipeline end manifold (PLEM) for transportation to shore via the subsea pipeline. A 24-inch short subsea flow line will connect each PLEM to a 36-inch diameter subsea pipeline for transport of vaporized natural gas to onshore facilities. Figure 2 illustrates as SRV attached to an unloading buoy.

The SRVs will deliver the LNG from Port Dolphin affiliate companies' global portfolio of LNG locations in the Caribbean, Africa, and the Middle East. Port Dolphin expects to begin operation in the fourth quarter of 2013, or the first quarter of 2014, and the deepwater port will have an expected 25-year design operating life.

Figure 2: Port Dolphin's SRV attached to an Unloading Buoy

Source: Port Dolphin August, 2010 Application

Air pollutant emissions generated from the deepwater port will include carbon monoxide (CO), oxides of nitrogen (NO_x), particulate matter (PM), particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC) (known as criteria pollutants), as well as other regulated air pollutants, including sulfuric acid mist (H_2SO_4) and greenhouse gas (GHG) pollutants. VOC and NO_x are the measured pollutants for the criteria pollutant ozone, and NO_x and SO_2 are precursors for $PM_{2.5}$. Based on emissions estimates, and the applicable permitting thresholds, the project is considered to have significant emissions of NO_x (as the measured pollutant for the criteria pollutants nitrogen dioxide and ozone, and as a precursor to $PM_{2.5}$), CO, GHGs, PM, PM_{10}, $PM_{2.5}$, SO_2, H_2SO_4, and VOC (as the measured pollutant for the criteria pollutant ozone), and is subject to the CAA's title I, part C, PSD preconstruction permit program as a result of these emissions.

Each SRV will operate with any combination of up to four natural gas-fired marine boilers. All boilers will be equipped with low NO_x burners and selective catalytic reduction (SCR) systems for NO_x, $PM_{2.5}$, and ozone emissions reduction. In addition, the boilers will use tuning, optimization, instruments and controls, and reduction of air leakages and steam trap leaks to control GHG emissions.

Any combination of up to three engines will operate at full or partial load. Engines will be equipped with SCR for NO_x, $PM_{2.5}$, and ozone reduction. They will also be equipped with oxidization catalysts for CO and VOC reduction. The engines will operate in natural gas combustion mode, and will use low

sulfur diesel fuel for less than 1% of the operating time as a pilot fuel during normal operations. The engines will also use low sulfur diesel fuel during startup. All calculations are based on operation at full load and worst case emission scenarios.

III. SOURCES OF AIR EMISSIONS

III.A. Stationary Equipment

The permitted emission units onboard the SRVs include the following pieces of equipment. The Unit ID Numbers are those referenced in the draft permit.

Table 1: List of Permitted Emission Units Onboard the SRV

Unit ID Number	Description
B1, B2, B3, B4	Four 278 MMBtu/hr natural-gas boilers
GE1, GE2	Two 11,400 kW dual-fuel power generator engines operating in the gas mode, Wärtsila (or equivalent) model 12V50DF
GE3	One 5,700 kW dual-fuel power generator engine operating in the gas mode, Wärtsila (or equivalent) model 6L50DF

III.A.1 SRV Vaporization Boilers

Port Dolphin proposes to equip each SRV with up to four, of approximately 278 MMBtu/hr, natural gas-fired marine boilers. The boilers will operate during LNG vaporization while the SRV is moored. All boilers will operate at up to 100% load, and the maximum cumulative operation of all boilers will not exceed 1,112 MMBtu/hr.

III.A.2 Power Engines

Port Dolphin proposes to equip each SRV with up to two Wärtsilä (or equivalent) 12V50DF, 11,400 kW engines, and one Wärtsilä (or equivalent) 6L50DF, 5,700 kW engine. The engines will generate power for regasification, propulsion, positioning and hoteling. Each engine will operate in natural gas combustion mode using low sulfur diesel fuel oil for less than 1% of operating time as a pilot fuel during normal operations and also during startup.

III.A.3 Marine Support Vessels

Support vessels that service the SRV will also generate emissions. These vessels include the following:

- One crew boat with a diesel engine rated at 700 hp burning low sulfur fuel
- One supply boat with a diesel engine rated at 700 hp burning low sulfur fuel

Vessel emissions were considered in the air quality modeling that was used for both CAA and National Environmental Policy Act reviews. However, the support vessels are considered mobile sources, regulated under title II of the Clean Air Act, and are not considered primary emissions units for the purpose of the stationary source permitting programs.

III.A.4 Additional Equipment

In addition, Port Dolphin identified a "suction drum," also referred to as a re-condenser, and gas and oil tanks as part of the emissions inventory. The suction drum will buffer between the four main cargo tanks containing LNG and the vaporization plant, but will primarily function as part of the piping system. This pressure vessel will not emit any hydrocarbon, VOCs, or GHGs, unless a leakage occurs. The diesel tanks and associated piping onboard for marine gas oil and marine diesel oil will be located below deck. These sources are expected to have negligible, if any, contribution to the total emissions, and hence are not included in the calculations.

III.B. Estimated Air Emissions

Details of the following estimates can be found in Appendices G-1 and G-3 of the permit application and Appendix G-1 Addendum submitted in February 17, 2011 and July 20, 2011.

III.B.1 Startup Emissions

The engines will have the SCRs engaged as they approach the exclusion zone to ensure the SCRs are heated to work optimally. The SCRs become activated once the exhaust temperature reaches 290 °C. However, in order to maintain flexibility, Port Dolphin included the startup emissions for 70 startups

each 1-hour in duration. Port Dolphin used the startup emission factors of the large 12V50DF engines as the basis for all of the generator startups. During startup, low sulfur diesel fuel will fire the generators. The startup will follow the allowable load-increase curve found in Appendix G-1 Addendum submitted in July 20, 2011. Port Dolphin has conservatively assumed a 50% load for the duration of the startup. It is important to note, that the SCR catalysts have been sized for operation on natural gas, which is representative of normal operation.

During standard procedures, the boilers will undergo startup to 30% load outside the exclusion zone in order to warm before regasification begins. Port Dolphin conservatively assumed zero SCR efficiency and 10% load for the duration of the startup.

The following table presents the estimated air emissions during the 1-hour startup period. GHG emissions are measured as CO_2-equivalents (CO_2e).

Table 2: Estimated Emissions During Initial Startup Period

Qty	Description	Rating (each)	Emissions, (tons per year)						
			CO	**NO_x**	**PM**	**$PM_{10/2.5}$**	**VOC**	**SO_x**	**CO_2e**
4	Marine Boiler	278 MMBtu/hr	0.32	1.98	0.058	0.044	0.032	0.0035	10,018
2	Generator Wärtsila 12V50DF	11.4 kW	4.93	8.80	-	0.19	2.11	0.31	775
1	Generator Wärtsila 6L50DF engine (1)	5.7 kW	1.23	2.20	-	0.048	0.53	0.076	194
Total Emissions			**6.48**	**12.98**	**0.058**	**0.28**	**2.67**	**0.39**	**10,987**

Source: May, 2011 Appendix G-1 – Addendum Table 2 and Table 3.
Notes:

- Emissions are based on 70 startups of 1-hr duration each per year for each piece of equipment.
- Generator emissions are based on diesel with a 0.05% sulfur content use for worst-case "black start" mode; engines will operate at 50% load.

III.B.2 Normal Operations

The following tables present the estimated annual air emissions of criteria pollutants, GHG, ammonia, and HAPs from normal operation of the equipment onboard the SRV, and mobile sources within the exclusion zone. The estimates are based on the following assumptions:

- SRV throughput of 1.2 bscf/d for 365 days/year.
- Operation of Wärtsila 12V50DF generators and Wärtsila 6L50DF generator at 100% load for 8,760 hrs/yr on 99% gaseous load and 1% low sulfur diesel load (based on operating time) as a pilot fuel to stabilize combustion.
- Operation of marine boilers at 100% load for 8,760 hrs/yr.
- Operation of one crew boat run on diesel fuel for one hour a day per day for 365 days/yr.
- Operation of one supply boat run on diesel fuel for one hour a day per day for 104 days/yr.
- Air pollution control devices will be in operation whenever the equipment is in operation.
- Natural gas will be the primary fuel for normal operations (as noted above, generator units will combust diesel fuel for 1% of the operating time.)
- The sulfur content of all diesel fuel is limited to 0.05 %.
- 30% of the SO_2 converts to H_2SO_4.
- All PM_{10} emissions are assumed to be $PM_{2.5}$ emissions.

Table 3: Estimated Pollutant Emissions

Qty.	Description	Rating (each)	Annual Emissions (tpy)									
			NO_x	VOC	CO	SO_2	$PM_{10/2.5}$	PM	CO_2e	NH_3	H_2SO_4	Lead
4	Marine Boiler	278 MMBtu/hr	64.29	28.89	80.36	3.75	39.92	53.58	626,860	24.04	1.48	0.0026
2	Generator	11,400 kW	96.78	72.59	79.85	54.84	3.15	3.15	169,542	7.29	35.99	-
1	Generator	5,700 kW										
2	Supporting Vessels	700 hp	3.94	0.12	0.90	0.046	0.066	0.080	-	-	0.031	-
	Fugitive	-	-	-	-	-	-	-	9.114	-	-	-
Total Emissions			**165.01**	**101.59**	**161.11**	**57.13**	**43.13**	**56.80**	**807,874**	**31.33**	**37.49**	**0.0026**

Source: August, 2010 Application, Table: G-1-8, and February, 2011 Attachment Addendum, Table 1.

Table 4: Estimated HAP Emissions

HAP (tpy)	Boilers (4)	Generators (3)	Crew Boat	Supply Boat	Total
Acetaldehyde	<0.001	0.041	<0.001	<0.001	0.041
Acrolein	<0.001	0.013	<0.001	<0.001	0.013
Benzene	0.011	1.26	<0.001	<0.001	1.271
Formaldehyde	3.94	0.13	<0.001	<0.001	4.07
n-hexane	9.45	<0.001	<0.001	<0.001	9.45
Napthalene	<0.001	0.21	<0.001	<0.001	0.21
Toluene	0.018	0.46	<0.001	<0.001	.478
VOC-HAP	0.010	<0.001	<0.001	<0.001	0.010
Arsenic	0.0011	<0.001	<0.001	<0.001	0.0011
Beryllium	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	0.0058	<0.001	<0.001	<0.001	0.0058
Chromium	0.0074	<0.001	<0.001	<0.001	0.0074
Cobalt	<0.001	<0.001	<0.001	<0.001	<0.001

Manganese	0. 020	<0.001	<0.001	<0.001	0.0020
Mercury	0.. 014	<0.001	<0.001	<0.001	0.0014
Nickel	0. 11	<0.001	<0.001	<0.001	0.011
Selenium	< .001	<0.001	<0.001	<0.001	<0.001
Xylene	<' 001	0.31	<0.001	<0.001	<0.001
Total HAPS					**15.89**

Source: August, 20'0 Application, Tables: G-3-27,G-3-30, G-3-32

Potential HAP emissions do not exceed major source threshold levels for HAPs for any single HAP (10 tpy) or any combination of HAPs (25 tpy).

IV. REGULATORY ANALYSIS

IV.A. An Overview of Review

The Deepwater Port Act requires that "The law of the nearest adjacent coastal state...is declared to be the law of the United States, and shall apply to any deepwater port…to the extent applicable and not inconsistent with any provision or regulation under this Act or other Federal laws and regulations" [§ 19(b)]. Therefore, this section identifies the preconstruction regulations and the state regulations that apply to the proposed project, and how Port Dolphin expects to comply with the regulations.

With respect to identifying the regulations, the EPA determined that the proposed Port Dolphin deepwater port includes the following:

- Two subsea buoys, each with a flexible riser assembly and a manifold connecting the riser assembly, via a flow line, to the subsea Pipeline Lateral and;
- The emissions from each SRV while moored to the buoys.

In accordance with the Deepwater Port Act, the EPA has determined that the State of Florida portion of the federally approved State Implementation Plan contains the applicable air permitting regulations, as implemented through the Florida Administrative Code (F.A.C.). The rules listed below are applicable to Port Dolphin and most serve as the basis for one or more permit conditions.

Relevant Florida State Implementation Plan Regulations:

- F.A.C. 62-4: Permits
    - 62-4.030, 62-4.050, 62-4.055, 62-4.060, 62-4.070, 62-4.080, 62-4.090, 62-4.100, 62-4.110, 62-4.120, 62-4.130, 62-4.150, 62-4.160, 62-4.210, 62-4.220, 62-4.249
- F.A.C. 62-204: Air Pollution Control – General Provisions
- F.A.C. 62-210.300: Stationary Sources General Requirements
        - 62-210.300(1), 62-210.300(2), 62-210.300(5), 62-210.300(6), 62-210.300(7)
    - 62-210.360: Administrative Permit Corrections
    - 62-210.360: Emissions Computing and Reporting
        - 62-210.370(1), 62-210.370(2), 62-210.370(3)
    - 62-210.550, 62-210.650, 62-210.700
    - 62.210.900: Forms and Instructions
        - 62.210.900(1), 62.210.900(2), 62.210.900(5), 62.210.900(6), 62.210.900(7)
- F.A.C. 62. 212 Stationary Sources – Preconstruction Review
    - 62.212.100, 62.212.200, 62.212.300, 62.212.400, 62.212.410, 62.212.710
- F.A.C. 62.213: Operating Permits for Major Sources of Air Pollution
- F.A.C. 62.214: Acid Rain Program Requirements
- F.A.C. 62-296.320: Stationary Sources- Emission Standards, General Pollutant Emission Limiting Standards
- F.A.C. 62-297: Stationary Sources Emission Monitoring

IV.B. Stationary Source Regulations: New Source Review (NSR)/PSD Program

The CAA requires stationary sources classified as "major" to obtain preconstruction permits in accordance with the applicable state regulations for nonattainment New Source Review (NSR) and/or the Prevention of Significant Deterioration (PSD), depending on whether the local air quality is classified as being "attainment" or "nonattainment" with the National Ambient Air Quality Standards (NAAQS) for each pollutant (NAAQS are further discussed in Section VI). The air quality at the project location (28 miles off the Florida coast, outside the state territorial boundary) has not been classified. The counties along the Florida coast adjacent to the project are Pinellas, Hillsborough, Manatee, and Sarasota. Part of Hillsborough County, Florida was recently designated nonattainment for the lead NAAQS; however, Port Dolphin will not emit lead above the significance threshold. None of the areas adjacent to Port Dolphin deepwater port are designated nonattainment for any pollutants emitted above the significance threshold; therefore, attainment regulations apply. Pursuant to the Deepwater Port Act,

the EPA is the permitting authority for deepwater ports, and serves as the permitting authority for all applicable state requirements.

New major sources of air emissions located in attainment areas are subject to regulations to prevent significant deterioration of air quality in accordance with F.A.C. 62-212.400 and are required to obtain a PSD air permit. The PSD regulations define a "major source" as any source type belonging to a list of 28 source categories, which emits or has the potential to emit 100 tpy or more of any pollutant regulated under the CAA, or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tpy (F.A.C. 62-210.200 (189)(a)1.) Among the source categories listed under F.A.C. 62-210.200 (189)(a)1. are "fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input." Each SRV will include up to four 278 MMBtu/hr natural gas fired steam boilers.

Beginning on January 2, 2011, greenhouse gases (GHG) became subject to regulation under the PSD major source permitting program as a regulated NSR pollutant when emitted in amounts greater than certain applicability thresholds. Florida has not yet adopted the GHG provisions in their state regulations. The EPA, however, promulgated a Federal Implementation Plan to provide authority for regulations of GHGs in compliance with the CAA (75 FR 250, December 30, 2010). Therefore, GHG is a regulated air pollutant for the purpose of the Port Dolphin preconstruction permit. Under the Federal regulations GHG are a single air pollutant defined in 40 CFR 52.21(b)(49)(i) as the aggregate group of the following six gases:

- Carbon dioxide (CO_2);
- Nitrous oxide (N_2O);
- Methane (CH_4);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur hexafluoride (SF_6).

Due to the nature of GHGs and their incorporation into the definition of "subject to regulation," the determination of whether a source is emitting GHGs in an amount that triggers PSD applicability involves a calculation of the source's CO_2e emissions as well as its GHG mass emissions. Specifically, when determining the applicability of PSD to GHG, there is a two-part applicability process that evaluates both:

- The sum of the CO_2e emissions in tpy of the six GHG, in order to determine whether the source's emissions are a regulated NSR pollutant; and, if so;
- The sum of the mass emissions in tpy of the six GHGs, in order to determine if there is a major source or major modification of such emissions.

For PSD permits issued on or after July 1, 2011, PSD applies to the GHG emissions from a proposed new source if either of the following are true: (1) the source is subject to PSD for another pollutant and the potential to emit GHG is greater than or equal to 75,000 tpy on a CO_2e basis and greater than zero tpy on a mass basis; or (2) the potential emissions of GHGs from the new source would be equal to or greater than 100,000 tpy on a CO_2e basis and equal to and greater than 100/250 tpy on a mass basis.

The objective of the PSD program is to prevent significant adverse environmental impact from air emissions by a proposed new or modified source. The PSD program limits degradation of air quality to that which is not considered "significant." Port Dolphin will emit approximately160 tpy of NO_x, 101 tpy of VOC, 161 tpy of CO, and 807,874 tpy of CO_2e, and is therefore subject to PSD review. In addition, emissions of SO_2, PM and $PM_{10/2.5}$ are all greater than the applicable significant emissions rate, as defined in the applicable Florida PSD requirements (F.A.C. 62-210.200 (274)), and are thereby also subject to PSD review. The PSD program requires an assessment of air quality impacts of the proposed project, including visibility and impact to Class I areas, and also requires the utilization of the best available control technology as determined on a case-by-case basis taking into account energy, environmental and economic impacts and other costs. The following analyses summarize how Port Dolphin complies with the best available control technology and air quality impact requirements. Additional, more detailed information can be found in the application and the administrative record for this project.

IV.C. Best Available Control Technology

A new major stationary source subject to PSD requirements is required to apply BACT for each pollutant subject to regulation under the CAA that it would have the potential to emit in significant amounts. *See* F.A.C. 62-210.200 (40) and 62-212.400(4)(c). Based on the emission inventory for the project, presented in Table 2 of the Preliminary Determination, all the listed pollutants will be emitted in quantities exceeding the significant emission rate.

BACT is defined in the applicable permitting regulations at F.A.C. 62-210.200 (40), in part, as:

(a) An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department[2], on a case by case basis, determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant, taking into account:

1. Energy, environmental and economic impacts, and other costs;

2. All scientific, engineering, and technical material and other information available to the Department; and

3. The emission limiting standards or BACT determinations of Florida and any other state.

(b) If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.

(c) Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.

(d) In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61, and 63.

The CAA contains a similar BACT definition, although the 1990 CAA amendments added "clean fuels" after "fuel cleaning or treatment" in the above definition. 42 USC § 7479(c).

The top-down BACT approach provides that all available control technologies be ranked in descending order of control effectiveness. Each alternative is then evaluated, starting with the most stringent, until BACT is determined. The top-down approach consists of the following steps:

Step 1: Identify all available control technologies.

Step 2: Evaluate technical feasibility of options from Step 1 and eliminate options that are technically infeasible based on physical, chemical and engineering principles.

[2] This passage references the Florida Department of Environmental Protection; however, in this case the EPA is the permitting authority.

Step 3: Rank the remaining control technologies from Step 2 by control effectiveness, in terms of emission reduction potential.

Step 4: Evaluate the most effective controls from Step 3, considering economic, environmental and energy impacts of each control option. If the top option is not selected, evaluate the next most effective control option.

Step 5: Select BACT (the most effective option from Step 4 not rejected).

The discussion below describes the BACT evaluations on a pollutant-specific basis for the SRV vaporization boilers and power generation engines. The following section is based on the information provided in the Port Dolphin application, Appendix G-1 (August 27, 2010) and Appendix G-1 Addendums (February 17, 2011 and July 20, 2011).

IV.C.1 Nitrogen Oxides

NO_x emissions are generated as both a result of high temperature combustion (thermal NO_x) and oxidation of nitrogen present in the fuel (fuel-bound NO_x). Thermal NO_x emissions increase with an increase in combustion temperature and are generally the main cause of NO_x emissions from a combustion source.

IV.C.1.i NO_x Marine Boilers

As the first step in their BACT analysis, Port Dolphin identified the following control technologies: low NO_x burners, flue gas recirculation with or without low NO_x burners, selective non-catalytic reduction with or without low NO_x burners, and selective catalytic reduction (SCR) with or without low NO_x burners. The applicant determined all four control options as technically feasible. However, SCR with low NO_x burners has a higher NO_x control efficiency and is the highest ranked (most effective) control technology in step three of the BACT analysis. In step four of the BACT analysis, Port Dolphin conducted the cost evaluation and determined that SCR with low NO_x burners is cost effective, at $2831 per ton of NO_x removed. Therefore, the EPA determined SCR with low NO_x burners as BACT for the marine boilers.

The applicant initially proposed a BACT limit of 0.037 lb/MMBtu. However, comparable facilities in Region 1, Northeast Gateway Energy Bridge and Neptune, have NO_x BACT limits of 0.018 lb/MMBtu

and 0.012 lb/MMBtu, respectively. After further consultation, Port Dolphin resubmitted an updated permit application with NO_x emissions of 0.012 lb/MMBtu. The EPA has determined that BACT for the marine boilers is SCR with low NO_x burners, and limiting NO_x emissions to 0.012 lb/MMBtu averaged over three hours.

IV.C.1.ii NO_x Generator Engines

As the first step in their BACT analysis the applicant identified the following available control technologies: good combustion practices, non-selective catalytic reduction, and SCR. Non-selective catalytic reduction is technically infeasible for use on these engines. Only natural gas rich-burn engines that do not have significant concentrations of oxygen can use non-selective catalytic reduction. Therefore, Port Dolphin determined the only technically feasible options as good combustion practices and SCR. SCR has a higher NO_x control efficiency than good combustion practices, and is therefore ranked higher in step three of the BACT analysis. In step four of the BACT analysis, Port Dolphin demonstrated that SCR is also economically feasible; the applicant estimated the cost effectiveness at $3,332 per ton of NO_x removed. The EPA selected SCR as BACT for the generator engines with a NO_x limit of 0.20 g/kW-hr averaged over three hours.

IV.C.2 Carbon Monoxide

CO emissions result from incomplete combustion. Insufficient residence time during the final step in the oxidation of hydrocarbons during combustion will produce CO. The maximum oxidation of CO to carbon dioxide (CO_2) occurs when the combustion process maintains sufficient temperature, residence time, and oxygen supply.

IV.C.2.i CO Marine Boilers

The applicant identified the following technologies for the control of CO emissions from the marine boilers in step one of the BACT analysis: good combustion practices and catalytic oxidation. Both methods are technically feasible, but catalytic oxidation has a higher CO control efficiency, and is ranked the number one control in step three of the BACT analysis. However, in step 4, the cost analysis demonstrated that catalytic oxidation is cost prohibitive for the boilers, at $29,938 cost/ton of CO

removed. Therefore, the EPA has determined that BACT for the marine boilers is good combustion practices, operating in accordance with the manufacturer specifications, and limiting CO emissions to 0.015 lb/MMBtu averaged over three hours.

IV.C.2.ii CO Generator Engines

The applicant identified the following control technologies for CO emissions from the generator engines: improved combustion or good combustion practices and catalytic oxidation. Both methods are technically feasible, but catalytic oxidation has a higher CO control efficiency and is the preferred technology, (as mentioned above). The applicant estimated the cost effectiveness for the addition of catalytic oxidation at $4,057 per ton of CO removed. Therefore, the EPA has concluded that BACT for the generator engines is catalytic oxidation and limiting CO emissions to 0.165 g/kW-hr averaged over three hours.

IV.C.3 Sulfur Dioxide and Sulfuric Acid Mist

SO_2 and emissions from fuel combustion correlate directly to the sulfur content of the fuel. Emissions of SO_2 into the atmosphere oxidize to form SO_3, which then combines with water to form H_2SO_4 (sulfuric acid mist). High sulfur content fuels include coal and residual oil. However, the use of clean fuels like natural gas is the best alternative for the control of SO_2 and H_2SO_4emissions from fuel combustion sources. Natural gas contains trace amounts of naturally occurring sulfur compounds and mercaptan, which is added to natural gas as an odorant for leak detection and safety purposes; otherwise natural gas has negligible sulfur content.

IV.C.3.i SO_2 Marine Boilers and Generator Engines

The applicant appropriately identified the use of natural gas, *i.e.* low sulfur fuel, as the best available control technology. The only control technology identified was the use of natural gas. The dual-fuel power generation engines will use greater than 99% (by weight) natural gas, and will therefore use the best alternative to minimize SO_2 and H_2SO_4 emissions. The engines will use low sulfur distillate fuel oil as pilot fuel, and will not exceed 0.05 % (by weight) sulfur. For the purpose of estimating H_2SO_4 emissions, Port Dolphin assumed that 30% of the SO_2 converts to H_2SO_4. The EPA has concluded that

BACT for SO_2 and H_2SO_4 is use of natural gas and limiting SO_2 to 0.0006 lb/MMBtu and 0.16 g/kW-hr, and limiting H_2SO_4 emissions to 0.34 lb/hr and 8.22 lb/hr averaged over three hours for the marine boilers and generator engines, respectively.

IV.C.4 Particulate Matter

Particulate matter (PM) emissions depend on the type of fuel combusted and its ash content. Higher ash content fuels, such as coal, employ flue gas emission control systems.

Using natural gas as a fuel is the best alternative to minimize particulate matter emissions from external combustion sources. Natural gas is a clean fuel with a very low ash content, resulting in inherently low emissions of PM, assuming proper combustion control is maintained. All PM emitted from natural gas combustion is expected to be PM with an aerodynamic diameter of 10 microns or less (PM_{10}). Port Dolphin conservatively assumed that the emission rate of particulate matter of 2.5 microns of less ($PM_{2.5}$) equals the PM_{10} emission rate.

IV.C.4.i PM Marine Boilers and Generator Engines

The only control technology identified was the use of natural gas. The proposed marine boilers and generator engines will use the best fuel (natural gas) to minimize PM emissions. The EPA has concluded that BACT is use of natural gas and limiting the PM emissions to 0.01 lb/MMBtu and the PM_{10} and $PM_{2.5}$ emissions to 0.0075 lb/MMBtu and for the marine boilers. The EPA has concluded that BACT is use of natural gas and limiting the PM, PM_{10}, and $PM_{2.5}$ emissions to 0.0065 g/kW-hr averaged over three hours for the generator engines.

IV.C.5 Volatile Organic Compounds (VOC)

Incomplete combustion of fuel results in emissions of unburned hydrocarbons. VOC compounds participate in atmospheric photochemical reactions. These reactions can result in the formation of ozone. VOCs do not include methane, ethane, and other compounds that have negligible photochemical reactivity. Natural gas is comprised primarily of methane, which is not considered a VOC. Combustion practices that promote combustion efficiency minimize VOC emissions.

IV.C.5.i VOC Marine Boilers

Both control alternatives mentioned for CO can reduce VOCs simultaneously. In step four of the BACT analysis the applicant cited the cost analysis for CO, and determined the addition of an oxidation catalyst infeasible, see Section IV.C.2.i. The EPA has concluded that BACT is good combustion practices, operating in accordance with the manufacturer specifications, and limiting VOC emissions to 0.0054 lb/MMBtu averaged over three hours.

IV.C.5.ii VOC Generator Engines

Both control alternatives mentioned for CO can reduce VOCs simultaneously. The oxidation catalyst selected for CO as BACT will also reduce VOC emissions. The EPA has concluded that BACT is oxidation catalyst and limiting VOC emissions to 0.15 g/kW-hr averaged over three hours.

IV.C.6 Greenhouse Gas Emissions (GHGs)

The primary GHG emitted from the boilers and engines is carbon dioxide (CO_2), which is a direct biproduct of the combustion of carbon fuels. CO_2 emissions also result from the oxidation of carbon monoxide (CO), which is generated from incomplete combustion of carbon in the fuel. The combustion process also produces methane CH_4 and N_2O, in much smaller amounts.

IV.C.6.i GHGs Marine Boilers

In step one of the BACT analysis, Port Dolphin identified a series of control technologies in their BACT analysis, found in their July 20, 2011, Application Addendum:

CO_2 Controls:

- Replace/Upgrade Burners
- Tuning
- Optimization
- Instrumentation & Controls
- Economizer
- Air Preheater
- Create Turbulent Flow within Firetubes

- Insulation
- Reduce Air L akages
- Capture Ener y From Boiler Blowdown
- Condensate F eturn System
- Reduce Slagg ng and Fouling of Heat Transfer Surfaces
- Insulation Jacl ets
- Reduce Stem rap Leaks
- Carbon Captu e and Storage
- CSNOx
- Alternative Fuels – Biomass
- Co-Firing
- Fuel Switching/Clean Fuels
- Combined Heat and Power

CH_4 Controls:

- Post Combustion Incinerator

N_2O Controls:

- None known

In step two, Port Dolphin found the subsequent technologies technically infeasible for the following reasons:

- Economizer: This technology requires unavailable space.
- Air preheater: This technology requires unavailable space.
- Reduce slagging and fouling of heat transfer surfaces: This technology is not applicable for boilers run on natural gas.
- Capture energy from boiler blowdown: This technology requires unavailable space.
- Condensate return subsystem: This technology requires unavailable space.
- Carbon capture and storage: There are no known carbon sequestration zones near the Port Dolphin facility, and the necessary piping infrastructure required to transport the CO_2 to any sequestration facility does not exist. This technology requires the separation of CO_2 from other pollutants in the gas stream; this equipment for capture requires significant space, which is not available on the Port Dolphin SRVs.
- CSNOx: This technology is currently in the licensing and commercial demonstration phase of development, and has not been demonstrated in practice. It is therefore technically infeasible for this project.

- Alternative fuels – biomass: The boilers are only designed for natural gas.
- Co-firing: This technology is not applicable, because the boilers are already firing 100% natural gas, which is cleaner than co-firing.
- Combined heat and power: This technology is not applicable; the engines are designed to generate power and the boilers are designed to generate heat.

CH_4 Controls:

- Post combustion incinerator: This processes produces more methane than will be reduced.

The remaining technologies are technically feasible and cost effective:

- Tuning: This technology is proposed for minimizing CO.
- Optimization: This technology is proposed for minimizing CO.
- Instrumentation & Controls: This technology is proposed for minimizing CO.
- Insulation/Insulation Jackets: The wall of the boiler is covered with insulating mats and with a metal cap (metal plates) that is around the insulating mats. In addition, the boilers will have an air gap between the plates and the metal cap.
- Create turbulent flow within firetubes: The firetubes are proposed to be designed with turbulent flow.
- Reduce air leakages: The marine boilers are new and have no known air leakages present. In addition, Port Dolphin has identified a gas detection system that will be in place onboard the SRV, see Section IV.C.6.iii.
- Reduce steam trap leaks: The marine boilers are new and have no known steam traps present. In addition, Port Dolphin has identified a gas detection system that will be in place onboard the SRV, see Section IV.C.6.iii.

Therefore, the EPA proposes that BACT for the marine boilers is tuning, optimization, instrumentation and controls, turbulent flow within firetubes, reduction of air leakages, reduce steam trap leaks, and limiting CO_2e emissions to 117 lb/MMBtu averaged over eight hours.

Port Dolphin will monitor the emissions of CO_2 from both the boilers and the engines. The other GHGs have very small emission rates. The sum of Port Dolphin's estimated emissions of N_2O and CH_4 from the boilers is 0.12 lb/MMBtu CO_2e. Since Port Dolphin must show compliance with a CO_2e emission

limit, given the small estimated emissions of the additional GHGs, Port Dolphin will still be in compliance by only monitoring CO_2.

IV.C.6.ii GHGs Generator Engines

Port Dolphin identified the following control technologies in their BACT analysis, found in their July 20, 2011, Application Addendum: carbon capture and storage, alternative/biomass fuel sources, CSNOx emissions abatement system, clean fuels/good combustion practices, and energy efficiency.

In step 2, Port Dolphin found carbon capture and storage, alternative/biomass fuel sources, and CSNOx technically infeasible. Carbon capture and storage and CSNOx are technically infeasible for the same reasons as sited in Section IV.C.6.i. Also, use of alternative/biomass fuel sources is not an applicable technology. The engines onboard the SRV are designed to run on diesel for startup only and then switch to natural gas; therefore, no measurable benefit can be derived from exploring alternative biomass fuel sources.

The remaining technologies are technically feasible: clean fuels, good combustion practices, and energy efficiency rating or using energy efficient engines. The engines are primarily fueled by natural gas, a clean fuel. Distillate oil will only be used in certain startup scenarios. Also, Port Dolphin compared the energy efficiency of the Wärtsilä engines to alternative competitor engines. The energy efficiency comparison indicated that the Wärtsilä engines are the most efficient available engines when operating at 100% load and firing natural gas.

Therefore, the EPA has determined that BACT for the generator engines is the use of natural gas in all normal operational scenarios, and limiting CO_2e emissions to 253 g/kW-hr when using diesel and 181 g/kW-hr when using natural gas averaged over eight hours.

Port Dolphin will monitor the emissions of CO_2 from both the boilers and the engines. The other GHGs have very small emission rates. The sum of Port Dolphin's estimated emissions of N_2O and CH_4 from the engines, when using diesel, is 0.85 g/kW-hr CO_2e and, when firing natural gas, is 0.18 g/kW-hr CO_2e. Since Port Dolphin must show compliance with a CO_2e emission limit, given the small estimated emissions of the additional GHGs, Port Dolphin will still be in compliance by only monitoring CO_2.

IV.C.6.iii GHGs Process Piping Fugitives

A Gas Detection System will monitor component leaks associated with process piping used to convey LNG from storage through the regasification process. Additionally, since the LNG contains mercaptan, which is added as an odorant for leak detection and safety purposes, Port Dolphin proposes to establish an Audio, Visual, and Olfactory (AVO) leak detection and repair program in addition to the Gas Detection System to minimize fugitive emissions of CH_4.

The Gas Detection System consists of an extensive network of gas monitoring devices located throughout the SRV. This system has been tested and approved for LNG carriers. The system on the SRV is of the "sniffing type," whereby a sample is taken once every 30 minutes. If a problem is detected gasification is halted and the lines are purged back to the storage vessel.

Port Dolphin has also proposed a supplementary AVO program. The program requires one or more operators to walk designated routes every twelve hours to note any audible indication of leaks, visual and tactile indication of leaks, and olfactory indications of mercaptan. Therefore, the EPA has determined that BACT for the process piping is use of the Gas Detection System and the AVO leak detection and repair program to eliminate fugitive GHG emissions.

IV.C.7 Fugitive and Unconfined Emissions

The deepwater port will not emit any uncontrolled or fugitive emissions. No particulate emissions will be generated since all fuels are gaseous or liquid, and no significant quantity of solids are transported and/or stored or involved in the LNG process. Also, no VOC emissions will be emitted because all tanks on the SRVs are located below deck at constant temperature and out of direct sunlight. No working losses will be generated because the tanks will not be filled in the deepwater port area. In addition, the suction drum and piping will not emit any hydrocarbons, VOCs, or GHGs unless a leakage occurs, as mentioned above.

IV.D. New Source Performance Stand rds

The PSD regulations require each major stationary source or major modification to meet applicable NSPS, per F.A.C. 62-212.400(10)(a). A specific NSPS subpart applies to a source based on source category, equipment capacity, and the date when the equipment commenced construction or modification.

New Source Performance Standards (NSPS), listed at 40 CFR 60, designate emission standards, testing requirements, operational requirements, monitoring requirements, and recordkeeping and reporting requirements for installation and operation of new or modified emission units. The following sections discuss the applicable emission standards.

IV.D.1 New Source Performance Standards Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

An affected facility for the purposes of NSPS Subpart Db is a steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity of greater than 100 MMBtu/hr (40 CFR 60.40b(a)). The marine boilers at Port Dolphin will have a heat input of up to 278 MMBtu/hr and fall within the definition of an affected facility. NSPS Db establishes emission standards for NO_x for natural gas fired units. The emission standard for NO_x is 0.20 lb/MMBtu specified 40 CFR 60.44b(1)(1). Compliance with this standard is determined on a 30-day rolling average basis, in accordance with 40 CFR 60.44b(i). The EPA's BACT analysis determined that the Port Dolphin deepwater port will utilize boilers with low NO_x burners and SCR (NH_3 injection) in order to achieve a NO_x emission limit of 0.012 lb/MMBtu or less. In addition, each boiler will be subject to NSPS recordkeeping and reporting requirements which will be incorporated in the title V permit.

IV.D.2 New Source Performance Standards Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

NSPS Subpart JJJJ applies to the two 11,400 kW (15,280 hp) and the 5,700 kW (7,640 hp) generator engines. The engines must comply with the emission standards in Subpart JJJJ Table 1. Non-emergency spark ignition engines with a maximum engine power greater than 500 hp and manufactured after July 1,

2010, must meet emission standards of 1.0 g/hp-hr (0.75 g/kW-hr) of NO_x, 2.0 g/hp-hr (1.49 g/kW-hr) of CO, and 0.7 g/hp-hr (0.52 g/kW-hr) of VOC. The EPA's BACT determinations are more stringent than the requirements of NSPS Subpart JJJJ, as discussed in Section IV.C. Port Dolphin will have to comply with applicable monitoring, compliance, testing, and reporting requirements which will be incorporated into the title V permit.

IV.E National Emission Standards for Hazardous Air Pollutants (NESHAPS) Subpart ZZZZ

NESHAP regulations are promulgated pursuant to Section 112 of the Clean Air Act and found in federal regulations at 40 CFR part 61 and 40 CFR part 63. NESHAPs set forth in 40 CFR part 63 apply to a source based on the source category listing, and the regulations generally establish different standards for new and existing sources pursuant to CAA section 112. In addition, many part 63 NESHAPs apply only if the affected source is a "major source" as defined in CAA section 112 and 40 CFR § 63.2. A major source is generally defined as a source that has the potential to emit 10 tons per year or more of any single "hazardous air pollutant" or "HAP," or 25 tons per year or more of all HAPs combined. *See* CAA § 112(a)(1) and 40 CFR § 63.2. An "area source" is any source that is not a major source as defined in CAA § 112(a)(2) and 40 CFR § 63.2.

As Table 4 shows, the project's estimated potential emissions are 15.89 tpy for all HAPs combined, and 9.45 tpy for the highest emitted HAP, n-Hexane. This makes the project an area source of HAP. As of May 3, 2013, owners and operators of reciprocal internal combustion engines at an area source of HAP emissions are subject to 40 CFR 63 subpart ZZZZ. However, because the generator engines are subject to 40 CFR part 60, subpart JJJJ, no additional requirements under subpart ZZZZ apply to the engines. *See* 40 CFR § 63.6585.

IV.F. F.A.C. 62-213: Operating Permits for Major Sources of Air Pollution

Pursuant to F.A.C. 62-213 and sections 501(2)(B) and 302(j) of the CAA, a " major source" under the title V program is one that directly emits, or has the potential to emit, 100 tpy or more of any air pollutant. With permitted emissions of 160 tpy of NO_x, 161 tpy of CO, and 101 tpy of VOC, Port Dolphin will exceed the title V major source threshold and will be required to obtain a title V permit. Pursuant to section 503(c) of the CAA, owners or operators of sources that must obtain title V permits

are required to submit a permit application within 12 months of beginning operation, or such earlier date as the permitting authority may establish. The requirement of Port Dolphin LLC to apply for a title V permit is reflected in Condition XIII.C of the draft permit. The title V operating permit will contain all the conditions included in the final permit to construct and will have additional requirements specifically associated with title V operating permits. For example, it will include requirements for submittal of annual compliance certifications and annual fee payments, based on actual emissions, as well as additional monitoring, recordkeeping, and reporting requirements that are not requirements of the preconstruction permitting program.

IV.G. State Stationary Source Regulations Not Applicable to Port Dolphin

The F.A.C. has adopted numerous prohibitory rules that regulate certain pollutants, equipment, industries, and operations. Many of them clearly do not apply to Port Dolphin because the proposed port does not contain the regulated substance or activity. However, the applicability of some rules is not readily apparent. The following section discuses the applicable State rules the EPA has concluded do not apply to Port Dolphin.

IV.G.1 F.A.C 62-296.320: General Pollutant Emission Limiting Standards

This provision establishes several standards for pollutants. Those that pertain to Port Dolphin include: VOCs, odor, general particulate emissions, and visible emission standards. As to the construction of the port, the EPA does not anticipate an odor problem because the construction will take place miles off-shore, and parts of it will be underwater.

IV.G.2 F.A.C. 62-296.508: Petroleum Liquid Storage

Section (a) of F.A.C. 62-296.508 states:

> The control technology set forth in Rule 62-296.508, F.A.C., shall apply to all fixed roof storage vessels with capacities equal to or greater than 42,000 gallons (159,000 liters; nominal design 1,000 barrels (bbls.) containing petroleum liquids whose true vapor pressure is greater than 1.50 psia (10.3 kilopascals) but shall not be used if the petroleum liquid has a true vapor pressure of 11.0 psia (76 kilopascals) or greater under actual storage conditions.

Because the diesel fuel storage tank has a capacity of 7.13×10^7 gallons and diesel fuel meets the definition of a reactive organic compound the tank could potentially be subject to the requirements of the rule. However, under ambient temperatures the vapor pressure of diesel will remain well below 1.50 psia. As a result the tank is not subject to 62-296.508.

V. EMISSIONS COMPLIANCE

This section describes the monitoring, recordkeeping, and reporting requirements Port Dolphin will conduct as part of its permit to ensure compliance with emission limitations.

V.A. Monitoring

Continuous Emissions Monitoring System (CEMS) instrumentation is often required to track specific emissions if monitoring of those emissions is critical to ensure that a requirement is being met, or to show that a requirement does not apply. However, the EPA understands the unique issues involved in requiring CEMS for emission units in the marine environment and on a deepwater port, hence an alternative system may be necessary to monitor pollutants. In brief, CEMS that comply with the federal performance standards under 40 CFR part 70 and 75 need to perform quarterly quality assurance test audits and yearly annual relative accuracy test audits (RATA) for certification. Typically, the EPA compliance personnel are required to witness these tests.

Two deepwater ports are currently in operation in the EPA Region 1. Port Dolphin's parent company, Höegh LNG, provided documents to the EPA Region 1 for the deepwater port Neptune that detailed the difficulties related to CEMS, and also suggested an alternative monitoring system.[3] In addition, Northeast Gateway provided documents to Region 1 EPA about alternative monitoring on their deepwater port.[4] Similar, or the same vessels, that will dock at Neptune will also dock at Port Dolphin. Therefore, the technical conclusions made for Neptune also apply to Port Dolphin. The following are the findings made by Region 1 for the deepwater port Neptune.

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[3] Emissions Compliance Monitoring Program Neptune LNG Deepwater Port: Additional Information Submittal-Minor Source Preconstruction Air Permit Application.

[4] Northeast Gateway Energy Bridge Deepwater Port Monitoring Plan. "Re: Air Quality Monitoring, Recordkeeping, and Reporting – Northeast Gateway Energy Bridge, LLC" letter August 1, 2006.

Neptune noted the difficulties with transporting the EPA personnel to the vessels operating 12 miles off the coast. Neptune also noted that 12 CEMS are required to monitor the four emission units on the three vessels proposed for its project. Since each CEMS requires its own yearly certification audit, the EPA would need to perform four audits on three separate visits to Port Dolphin.

The EPA asked Neptune for information on how monitoring could be performed on these vessels. Neptune submitted to the EPA a proposal for an emissions compliance monitoring program for its project. The proposal evaluated CEMS and parametric monitoring that rely on tracking critical operational parameters that affect emissions.[3]

In summary, Neptune concluded that the technical issues involved in installing NO_x CEMs on board the SRVs make CEMs impractical for this application. In place of CEMs, Neptune proposed using parametric monitoring.

Neptune's parametric monitoring proposal consisted of initial stack tests for NO_x, CO, and ammonia to confirm performance of the SCR system, maintaining records of operational parameters to confirm operations are normal and consistent with stack test parameters, and track fuel usage. A full description of the proposal can be found in the Region 1 supplemental documents for Neptune's permit.[3]

The EPA Region 1 also asked Gateway to submit a compliance program that addressed NO_x emission from its project. Similar to Neptune, Gateway noted the difficulties of using NO_x CEMs that meet the EPA certification regulations under 40 CFR 60 Appendix F.

However, in an August 1, 2006 letter, Gateway identified the SCR system's quality control analyzer as a likely alternative to the CEMs. Gateway noted several advantages of using the analyzer, the Siemens Ultramat 23. The analyzer will provide direct readings of the NO_x concentrations similar to CEMs. In addition, Gateway provided information showing that the analyzer can provide accurate readings using built in automatic recalibration technology, thus reducing test audits. Gateway's information indicated that the Ultramat is the only analyzer with proven marine SCR applications. A full discussion of the Ultramat 23 including performance specifications is found in the supplemental documents for the Gateway permit. [4]

The EPA's review of the instrumentation confirmed that its performance specifications are generally similar to the CEMs. The analyzer will provide greater compliance assurance than relying solely on Neptune's parametric monitoring plans. Gateway notes that the SCR vendor (Argillon GmbH) uses the Ultramat 23 exclusively for all its marine SCR applications. [3]

However, according to the manufacturer, the Ultramat 23 can monitor CO, CO_2, NO_x, and O_2. However, Port Dolphin must monitor for: NO_x, CO, VOC, PM, PM_{10}, $PM_{2.5}$ and CO_2. Therefore, the EPA proposes to use Neptune's parametric operational monitoring plan and the Ultramat instrument, or equivalent, to monitor Port Dolphin's NO_x, CO, and CO_2 emissions. In addition, the applicant will show compliance with the VOC, PM, and $PM_{10}/PM_{2.5}$ limits by performing an annual performance test and keeping track of operating hours.

Below are some, but not all, of the monitoring provisions that the EPA is proposing:

- Record the date and time of arrival and departure for each SRV at the deepwater port;
- Record the amount of fuel combusted each day in the boilers;
- Record the hours of operation of the power generation engines each day;
- Record the electrical output in kW from the power generation engines each day;
- Record the occurrence and duration of any startup, shutdown or malfunction in the regasification operations; any malfunction of air pollution control equipment or any period when the monitor is inoperative;
- Record the following monitor information: all calibration checks and audits; 3-hour average data for NO_x, CO, CO_2 (converted to lb/MMBtu or g/kWh);
- Record explanations for any calibration problems, and/or modifications to the monitor;
- Record the performance tests and calculations required to show compliance with the VOC, PM, and $PM_{10}/PM_{2.5}$ emission limits;
- Provide semi-annual reports that contain recorded emissions information for the deepwater port and identify any times when emissions are above the applicable emission standard;

In addition, Port Dolphin will generally determine compliance with its emissions limits using the procedures described in Section VI of the permit. However, in the event any of the emissions or

monitors indicate that Port Dolphin is not meeting the emission limits, the EPA may require a reevaluation of the emissions based on the best evidence of the actual emissions.

V.B. Vessel Access

As part of the monitoring plan the EPA personnel will need periodic access to the vessel to inspect all monitoring and emission equipment, and to witness any performance tests of any monitoring equipment. The EPA is proposing to make its authority to board the deepwater port and to carry out inspections a condition of the permit.

V.C. Recordkeeping

Port Dolphin will keep records of all operational parameters identified in its monitoring plan and emission data recorded by the monitor. These records will be kept at an on-shore location within the state of Florida that is accessible to EPA Region 4, and will retain the records for a minimum of 5 years. Port Dolphin will notify the EPA Region 4 within 15 days of the initial and all subsequent locations of the records.

V.D. Reporting

Port Dolphin will supply the EPA with all records upon request by the EPA. In addition, Port Dolphin will provide a semi-annual report of its emission calculations of NO_x, CO, SO_2, VOC, PM, PM_{10}, $PM_{2.5}$, and CO_2.

VI. NAAQS and AIR IMPACT ANALYSIS

Port Dolphin must demonstrate that emissions will not cause or contribute to a violation of a NAAQS. In addition, Florida's F.A.C 62-212.400 required Port Dolphin to conduct dispersion modeling to evaluate potential air quality impacts resulting from the proposed project.

VI.A. NAAQS Protection

The EPA has established primary and secondary NAAQS for six criteria pollutants: SO_2, PM_{10} and $PM_{2.5}$, NO_2, CO, ozone (O_3), and lead (Pb) (40 CFR Part 50). The CAA directed EPA to establish the primary ambient air quality standards to protect the public health. Secondary ambient air quality standards protect the public welfare from any known or anticipated adverse effects of a pollutant. The state of Florida has adopted the federal NAAQS by reference.

Table 5: Ambient Air Quality Concentration Values (Amended to show only project PSD pollutants)

Pollutant and Averaging Period		National Ambient Air Quality Standards ($\mu g/m^3$ (ppm))		PSD Increments ($\mu g/m^3$)		PSD Significant Impact Levels ($\mu g/m^3$)		PSD *De Minimis* Impact Levels ($\mu g/m^3$)
		Primary	Secondary	Class I	Class II	Class I	Class II	
Sulfur Dioxide	*1-hr*	195[k](0.75)[a]	None				7.80[k](0.003)[d]	
	3-hr	None	1,300[b](0.5)	25[b]	512[b]	1.0	25	13
	24-hr	365(0.14)[b,c]	None	5[b]	91[b]	0.2	5	
	annual	80(0.03)[c]	None	2	20	0.1	1	
Particulate Matter (PM_{10})	*24-hr*	150	150	8[b]	30[b]	0.3	5	10
	Annual	None	None	4	17	0.2	1	
Particulate Matter ($PM_{2.5}$)	*24-hr*	35[f]	35[f]	2[b]	9[b]	0.07	1.2	4
	Annual	15[g]	15[g]	1	4	0.06	0.3	
Carbon Monoxide	*1-hr*	40,000 (35)[b]	None				2000	
	8-hr	10,000 (9)[b]	None				500	575
Ozone	*1-hr*	(0.12)	(0.12)					
	8-hr (1997)	(0.08)[i]	(0.08)[i]					100[j]
	8-hr (2008)	(0.075)[i]	(0.075)[i]					
Nitrogen Dioxide	*1-hr*	188[h, k] (0.100)	None				7.55[k](0.004)[d]	
	Annual	100 (0.053)	100 (0.053)	2.5	25	0.1	1	14

Notes:

b- Not to exceed more than once a year

c- To be revoked 1 year after designations of the 1-hr standard (8/23/10).

d – Recommended interim SIL

f– Achieved when the average of the annual 98th percentile 24-hour concentration averaged over the years modeled is ≤ standard.

g –Achieved when the average of the annual mean concentration over the number of years modeled is ≤ standard.

i – Achieved when the average of the annual fourth-highest daily maximum 8-hour average concentrations is less than or equal to the standard.

j- Measured in tons/year of volatile organic compounds.

h- Achieved when the 98th percentile of the annual distribution of the daily maximum 1-hour average concentrations averaged over the number of years modeled is ≤ standard.

k – Values in ug/m³ are estimates. These may change when values and/or ppm to µg/m³ conversion procedures are provided by the EPA.

The State Implementation Plan provides the regulatory framework for a state to follow to demonstrate it will achieve and maintain the NAAQS. The state and federal permitting programs require new sources to demonstrate that emissions do not cause or contribute to a violation of a NAAQS. Port Dolphin's impact analysis shows that the emissions from the deepwater port will comply with all applicable NAAQS, as detailed below.

VI.B. General Conformity with State Implementation Plans for Air Quality

For projects in nonattainment areas and maintenance areas, if air emissions exceed thresholds identified in the EPA's general conformity regulations (40 CFR 51 and 40 CFR 93 Subpart B), Federal agencies must demonstrate that those emissions are generally in conformity with State Implementation Plans prior to approving those projects. The General Conformity Rules apply only to federal actions in locations designated as non-attainment or maintenance areas for any criteria pollutant. All counties on the Florida coast adjacent to Port Dolphin are designated as attainment areas for all pollutants emitted above the significance threshold. Part of Hillsborough County, Florida was recently designated nonattainment for the lead NAAQS, as mentioned above. However Port Dolphin will not emit lead above the significance threshold. Therefore, Port Dolphin is not subject to general conformity.

VI .C. Air Impacts Analysis

Florida's regulations at F.A.C 62-212.400 require Port Dolphin to conduct dispersion modeling to evaluate potential air quality impacts resulting from the proposed project. Background for the air quality impacts is provided in Appendix G-4 of the application, and the description and analyses of the air quality impacts are provided in Appendix G-5.

The results of the PSD Class I area air quality analyses show that the project emissions do not exceed Significant Impact Levels (SIL) for Class I areas. In terms of the Air Quality Related Value (AQRV), Port Dolphin applied for an exemption waiver from the Federal Land Managers based on the 2008 Phase I Report's "Initial Screening." The waiver request for exemption from Class I AQRV analyses, which include deposition and visibility impacts, was approved by the Federal Land Managers (Application Appendix G-5 page 25), and applies to two Class I areas within 300 km from the site. Therefore, the project emissions are considered not significant enough to impact any PSD Class I area. The applicant

modeled the pollutants using AERMOD and OCD, and selected the highest predicted results, that were modeled over a five year period. The highest predicted values for the regulated pollutants pass the Class I Area impact analysis, as shown in Table 6.

Table 6: PSD Significant Impact Level for Class I Areas

Pollutant, Averaging Period	Highest Modeled µg/m³	Class I SIL µg/m³
NO_2, Annual	0.0225	0.1
SO_2, 3-hr	0.27	1
SO_2, 24-hr	0.08	0.2
SO_2, Annual	0.01	0.1
PM_{10}, 24-hr	0.06	0.3
$PM_{2.5}$, 24-hr	0.06	0.07
$PM_{2.5}$, Annual	0.00255	0.04

Source: August, 2010 Application G-5.2 – Table 9

The PSD Class II area impact assessment was conducted based on previously submitted higher NO_2 levels, and showed project impacts exceeding the interim 1-hour SIL for NO_2 and SO_2 and 24-hour SIL for $PM_{2.5}$. The full cumulative NAAQS compliance analysis for all three pollutants showed all ambient modeled concentrations lower than applicable NAAQS. For Class II PSD Increment analysis, the only pollutant and time combination with a PSD increment value is the 24-hour $PM_{2.5}$. (Port Dolphin predicted the level of $PM_{2.5}$ by assuming all modeled PM_{10} was in fact $PM_{2.5}$. The values were then compared against the more stringent NAAQS standard for $PM_{2.5}$; therefore the analysis provided a conservative prediction of $PM_{2.5}$ emissions.) Table 7 shows that the $PM_{2.5}$ 24-hour results pass the PSD increment analysis.

Table 7: PSD Increment at Class II Areas

Pollutant	Modeled µg/m³	Increment µg/m³
$PM_{2.5}$	1.95	9

Source: August, 2010 Application G-5.2 – Table 15

VI.D. Visibility

On July 1, 1999, the EPA adopted its final regional haze regulation for protection of Class I areas. The regulations, at 40 CFR Part 51, set forth a national goal for visibility, specifically, the "prevention of any future, and the remedying of any existing, impairment to visibility in Class I areas which impairment results from manmade air pollution." The rule requires states to set goals and adopt implementation plans to reduce regional haze.

Port Dolphin performed a visibility impact analysis as part of their air emissions impact modeling. Two Class I areas are located within 300 km of the proposed site, Chassahowitzka Wilderness and Everglades National Park. The analysis used a Level-1 screening of VISCREEN, and confirmed that there is no plume visual impact either inside the Class I areas or outside the Class I areas. Therefore, the site does not indicate any visibility impairment for Class I areas.

VII. ADDITIONAL REQUIREMENTS

In the deepwater port licensing process for Port Dolphin, the U.S. Coast Guard (USCG) and the Maritime Administration (MARAD) assumed lead agency responsibilities for consulting with other federal/ftate agencies under various federal laws protecting the environment, natural resources, and cultural resources, including the Endangered Species Act (ESA), Magnuson-Stevens Fishery Conservation and Management Act, Coastal Zone Management Act, and National Historic Preservation Act. The Coast Guard and MARAD have generally integrated the analysis and consultation required under these statutes with the Nation Environmental Policy Act (NEPA) review of the project in accordance with 40 CFR § 1502.25.

In July 2009, the USCG and MARAD issued a final environmental impact statement (FEIS) including consultation documents and findings regarding the project's anticipated impacts. None of the consultations identified significant issues related to air quality. Nor have the consultations resulted in any conclusion by the USCG/MARAD that the project would result in unacceptable environmental impacts. Additional information regarding consultations under the Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, and the National Historic Preservation Act follows.

VII.A. Endangered Species Act and Marine Mammals Protection Act

Section 7(a)(2) of the Endangered Species Act (ESA) requires federal agencies, in consultation with the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service and/or the U.S. Fish and Wildlife Service (USFWS) (collectively, "the Services"), to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of a species listed as threatened or endangered, or result in the destruction or adverse modification of designated critical habitat of such species. 16 U.S.C. § 1536(a)(2); *see also* 50 CFR §§ 402.13, 402.14. The federal agency is also required to confer with the Services on any action that is likely to jeopardize the continued existence of a species proposed for listing as threatened or endangered or that will result in the destruction or adverse modification of critical habitat proposed to be designated for such species. 16 U.S.C. § 1536(a)(4); *see also* 50 CFR § 402.10. Further, the ESA regulations provide that where more than one federal agency is involved in an action, the consultation requirements may be fulfilled by a designated lead agency on behalf of itself and the other involved agencies. *See* 50 CFR § 402.07.

This deepwater port project involves several federal agencies whose actions are subject to the ESA. The USCG and MARAD are the designated lead federal agencies for licensing of the Port Dolphin LNG port and for considering all direct and indirect effects of the action on listed species. EPA participated as a cooperating agency in the review of the Port Dolphin License Application and Environmental Impact Statement Biological Assessment. On August 24, 2007, MARAD and USCG requested Section 7 consultation with the National Marine Fisheries Service (NMFS) and in a letter dated August 4, 2009, the National Oceanic and Atmospheric Administration (NOAA) and the NMFS concluded that the proposed licensing of Port Dolphin may affect, but is not likely to adversely affect, listed species under their purview. The USCG and MARAD received concurrence from the USFWS to terminate informal consultation pursuant to Section 7 on September 30, 2009. These letters are incorporated into the Administrative Record for this permit. As part of the above consultations, MARAD agreed to incorporate protection measures into the deepwater port license. The EPA's draft air permit also includes a condition requiring Port Dolphin to comply with all other applicable federal regulations.

VII.B. Magnuson-Stevens Fishery Conservation and Management Act

Pursuant to Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens), Federal agencies are required to consult with the Secretary of Commerce

(delegated to NMFS, or NOAA fisheries) with respect to "any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act." In addition, the Magnuson-Stevens Act also provides that the Secretary of Commerce "shall coordinate with and provide information to other Federal agencies to further the conservation and enhancement of essential fish habitat." USCG consulted with NOAA Fisheries and FWS during the development of the Environmental Impact Statement for this project and prior to issuance of the deepwater port license. These documents include mitigation measures to ensure that the impact of activities at Port Dolphin will have a less than significant impact on essential fish habitat.

VII.C. National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties. Section 106 requires the lead agency to ensure that any federally funded, permitted or licensed undertaking will have no effect on historic properties that are on or may be eligible for the National Register of Historic Places, and to allow the Advisory Council on Historic Preservation (ACHP) to comment on the undertaking. The authority to administer the provisions of the NHPA for offshore projects lies with the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE). BOEMRE has issued regulations at 30 CFR 250.194, 250(b)(15), 250.203(o), 250.204(b)(8)(v)(a), 250.204(s), and 250.1007(a)(5) that require preparation of an archeological resources report based primarily on the assessment of data obtained from the remote sensing survey.

For the purpose of evaluating potential impacts on cultural resources, Port Dolphin's Area of Potential Effect [APE] includes all of Main Pass 258 as well as a BOEMRE -standard 200-ft (60.9-m) corridor width along all proposed interconnect and terminal pipeline right-of-ways. The presence of a cultural resource within this region of influence (ROI) would be considered a potentially major, adverse impact because the installation of Port Dolphin's components could negatively impact the cultural resource.

In October and November of 2006, the Applicant conducted a comprehensive remote sensing survey of the offshore portion of the project. Eleven unidentified sonar contacts were recorded during the survey.

Four archeologically sensitive areas were identified during the surveys and recommended for avoidance during construction, operation, and decommissioning of the Port Dolphin.

VII.D. Executive Order 12898 – Environmental Justice

Executive Order (EO) 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," directs federal agencies, including the EPA, to the extent practicable and permitted by law, to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of regulatory programs, policies, and activities on minority populations or low-income populations. *See* EO 12898, 59 Fed. Reg. 7629 (February 11, 1994). Consistent with EO 12898 and the EPA's environmental justice policy (OEJ 7/24/09), in making decisions regarding permits, such as deepwater port and PSD permits, the EPA gives appropriate consideration to environmental justice issues on a case-by-case basis, focusing on whether its action would have disproportionately high and adverse human health or environmental effects on minority or low-income populations.

The EPA has concluded that this proposed air permitting action for Port Dolphin's deepwater port would not have a disproportionately high and adverse human health or environmental effects on minority or low-income populations. The deepwater port is located approximately 28 miles off the Florida coast and 42 miles southwest of the pipeline landing at Port Manatee, Florida. Analysis of the potential impacts, as discussed in the Final Environmental Impact Statement[5] for this project, shows that construction of the proposed Port and pipeline route would not impose health or environmental impacts above generally accepted norms and would not impose hazards or exposures appreciably higher than those of the general population.

VIII. PUBLIC PARTICIPATION

VIII.A Opportunity for Public Comment

These proceedings are subject to the EPA Procedures for Decision-making, set forth at 40 CFR part 124. As provided in part 124, the EPA is seeking public comment on the Port Dolphin PSD air permit DPA-

[5] USCG and MARAD. 2009. *Final Environmental Impact Statement and Environmental Impact Report for the Port Dolphin Deepwater Port License Application.* Prepared for Port Dolphin LLC, the U.S. Coast Guard, and the Maritime Administration by e^2M, Inc. 2009.)

EPA-R4001 during the public comment period as specified in the public notice.

Any interested person may submit written comments on the draft permit during the public comment period. If you believe any condition of the permit is inappropriate, you must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting your position by the end of the comment period. Any documents supporting your comments must be included in full and may not be incorporated by reference unless they are already part of the record for this permit or consist of state or federal statutes or regulations, EPA documents of general applicability, or other generally available referenced materials.

All timely comments will be considered in making the final decision, included in the record, and responded to by the EPA. The EPA may group similar comments together in our response, and will not respond to individuals directly.

All comments on the draft permit must be received by email or postmarked by November 14, 2011. Requests for a public hearing (see below) must be received by email or mail by October 31, 2011. An extension of the 30-day comment period may be granted at EPA's full discretion if the request for an extension adequately demonstrates why additional time is required to prepare comments. Comments must be sent or delivered in writing to the address below. All comments will be included in the public docket without change and may be made available to the public, including any personal information provided, unless the comment includes Confidential Business Information or other information in which disclosure is restricted by statute. Information that you consider Confidential Business Information or otherwise protected should be clearly identified as such and should not be submitted through email. If you send email directly to the EPA, your email address will be captured automatically and included as part of the public comment. Please note that an email or postal address must be provided with your comments if you wish to receive direct notification of the EPA's final decision regarding the permit and the EPA's response to comments submitted during the public comment period. For questions on the draft permit, please contact: Ms. Eva Land at 404-562-9103 or land.eva@epa.gov. Submit comments on the draft permit and requests for a public hearing to:

EPA Region 4, APTMD
61 Forsyth Street, SW
Atlanta, GA 30303
Attn: Eva Land

Fax: (404) 562-9066
Email: R4LNGpermits@epa.gov

VIII.B Public Hearing

The EPA has discretion to hold a public hearing if we determine there is a significant amount of public interest in the draft permit. Requests for a public hearing must be received by the EPA by email or mail by October 31, 2011, at the address given above, and state the nature of the issues proposed to be raised in the hearing. You may submit oral or written comments on the draft permit at the public hearing. You do not need to attend the public hearing to submit written comments. If there is significant public interest, the EPA will hold a public hearing on the draft PSD permit on November 14, 2011, at the location given in the public notice. If no request for a public hearing is received by October 31, 2011, or the EPA determines that there is not significant interest, *the hearing will be cancelled.* An announcement of cancellation will be posted on the EPA's website at: http://www.epa.gov/region4/air/permits/LNGPermits/LNGpermits.html, or you may call the EPA at the contact number above to determine if the public hearing will be held.

VIII.C Administrative Record

The administrative record contains the application, supplemental information submitted by Port Dolphin, and correspondence, including emails, between Port Dolphin and its consultants and the EPA clarifying various aspects of Port Dolphin's application. The draft permit and the administrative record are available for public review at the EPA Region 4 office and the Manatee County Central Library at the addresses listed below. Please call in advance for available viewing times.

Manatee County Central Library
1301 Barcarrota Boulevard West
Bradenton, Florida 34205-7522
(941) 748-5555

EPA Region 4 Office
61 Forsyth Street, SW
Atlanta, GA 30303
Phone: (404) 562-9103

The administrative record and draft permit are also available on the EPA's website at: http://www.epa.gov/region4/air/permits/LNGPermits/LNGpermits.html.

To request a copy of the draft permit, Pr liminary Determination, or notice of the final permit action, please contact: Ms. Rosa Yarbrough, Pe nit Support Specialist at: 404-562-9643, or R4LNGpermits@epa.gov.

VIII.D Final Determination

A decision to issue a final permit, or to eny the application for the permit, shall be made after all comments have been considered. Notice of the final decision shall be sent to each person who has submitted written comments or requested notice of the final permit decision, provided the EPA has adequate contact information.

IX. APPLICATION DOCUMENTS

- Port Dolphin Energy LLC: Deepwater Port License Application, Port Dolphin Project, Tampa Bay, Florida. Air Permit Data: Appendix G. Vol.1, dated August 2010.

- Port Dolphin Energy LLC: Deepwater Port License Application, Port Dolphin Project, Tampa Bay, Florida. Air Permit Data: Appendix G-1 - Addendum, dated February 2011.